IN THE UNITED STATES DISTRICT COURT
OF THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION

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U.S. DISTRICT COURT
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DATATREASURY CORPORATION V. INGENICO S.A., *d/b/a* GROUPE INGENICO, and INGENICO, INC.	§ § § § § §	No. 5:02CV95
DATATREASURY CORPORATION V. J.P. MORGAN CHASE & CO., J.P. MORGAN CHASE BANK, AFFILIATED COMPUTER SERVICES, INC., and ACS IMAGE SOLUTIONS, INC.	§ § § § § § § § §	No. 5:02CV124
DATATREASURY CORPORATION V. FIRST DATA CORPORATION, FIRST DATA MERCHANT SERVICES CORP., TELECHECK SERVICES, INC. *d/b/a* TELECHECK INTERNATIONAL, INC., and MICROBILT CORPORATION	§ § § § § § § § §	No. 5:03CV39

MEMORANDUM ORDER

This Order applies to each of three cases brought by Plaintiff DataTreasury Corporation against several defendants for patent infringement. At issue are U.S. Patent No. 5,910,988 ("the '988 patent") and U.S. Patent No. 6,032,137 ("the '137 patent"). The claim construction aspects of these cases have been divided into two phases – the first phase to determine which, if any, claim terms are to be construed under 35 U.S.C. § 112, ¶ 6, and the second phase to construe any disputed claim terms. The Magistrate Judge in this case has entered her Report and Recommendation ("the Report") in the second phase, construing the disputed claim terms. Before the Court now are the

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Objections of Plaintiff DataTreasury and Defendants First Data, J.P. Morgan, and Ingenico to certain recommendations in the Report. The Court conducted a *de novo* review of the Magistrate Judge's findings and conclusions.

The Defendants object to the construction of the term "transmit," in all its forms, in the Magistrate Judge's Report and Recommendation. The Magistrate Judge construed the term to mean "the sending of data electronically." The Defendants argue the term, contained in claims 42 and 46 of the '988 patent, should be construed to mean "sending encrypted data electronically." The Defendants rely on the prosecution history, wherein the Applicant amended claims and presented argument in response to a prior art rejection by the Patent Office Examiner. Specifically, the Applicant amended all the independent claims of his application to require the capture of images of paper transactions, and he amended selected claims, but not all claims, to explicitly recite encryption of the data. The Applicant then argued that "none of the cited references disclose, teach or suggest a secure network for processing based on a remote image capture of paper transaction data with encrypted communication between subsystems."

The Defendants argue that, in light of the Applicant's prosecution history statement, all of the independent claims must at least include two limitations: (1) remote capture of an imaged document, and (2) the encryption of that imaged data, even though claims 42 and 46 (unlike claims 1 and 26) do not expressly include the "encryption" limitation. *See* The First Data Defendants' Objection, page 3. The essence of the Defendants argument is that the Applicant disclaimed the ordinary meaning of the term "transmit."

In the context of the '988 patent, the ordinary meaning of the term "transmit" is "the sending of data electronically." The ordinary meaning of the term does not appear to be disputed, and that meaning plainly does not mandate an encryption requirement. The dispute between the parties is whether the Applicant had disclaimed any aspect of this term during prosecution. In the Report and Recommendation, the Magistrate Judge refused to hold that the Applicant had clearly disavowed the meaning of the "transmit" term.

The Defendants object to the Magistrate Judge's construction, arguing that it is "erroneous" in light of the prosecution history. The Defendants' proposed construction of requiring the "transmit" term to include "encryption" is incorrect for at least two reasons. First, for reasons stated in the Magistrate Judge's earlier report, the Applicant's statement did not amount to a clear disavowal. Second, the Defendants' proposed definition asks the Court to use the prosecution history statement to add a new "encryption" limitation to claims 42 and 46 that otherwise do not recite such a limitation.

The Court agrees with the Magistrate Judge's conclusion that the statement in the prosecution history does not amount to a clear disavowal of the ordinary meaning of the term "transmit." In addition to the reasons cited in the Report and Recommendation, the Court finds the statement in the prosecution history to be a characterization of the prior art rather than a summary statement of limitations that should be found in each and every claim. In view of the amendments made to the claims in that same Response in the prosecution history and the resulting claim language, the Court will not construe the statement as that clear disavowal needed to vary from the ordinary meaning of the disputed term.

The Federal Circuit has held that prosecution history statements cannot be used to add an entirely new limitation to the claim. *Serrano v. Telular Corp.*, 111 F.3d 1578 (Fed. Cir. 1997). In *Serrano*, the patentee distinguished the invention over the submitted prior art by stating that the prior art did not disclose an "automatic send signal means." Although certain claims of the patent at issue required generation of a "send" signal, claim 1 did not recite such a limitation. The *Serrano* court noted that the patentee's statement concerning whether the prior art discloses a "send" signal means was relevant only to those claims which require the generation of such a signal. Because claim 1 did not have the “send” limitation, the Court concluded that the prosecution history statement was not relevant to claim 1. While recognizing that statements in a file history may be used to explain and potentially limit the meaning of claim limitations, the Federal Circuit concluded that there was no basis here for the interpretation argued by Serrano. As such, the *Serrano* court held that the statements in question cannot be used to add a new limitation to the claim.

Like *Serrano*, in this case, only some of the independent claims, namely claims 1 and 26, require the “encryption” limitation at issue. This limitation is conspicuously missing from the other independent claims, claims 42 and 46. As such, under the rationale of *Serrano*, the prosecution history statement is relevant to only those claims that require encryption, namely claims 1 and 26, but not claims 42 and 46. As in *Serrano*, the Court here cannot use the prosecution history statement to add a new “encryption” limitation to those claims that do not otherwise call for it.

Another Federal Circuit case is pertinent to the case at hand. In *Intervet America, Inc. v. Kee-Vet Laboratories, Inc.*, 887 F.2d 1050 (Fed. Cir. 1989), the patent at issue involved a vaccine for a poultry disease. *Id.* at 1051. In that case, the examiner rejected the pending claims because they were not limited to a single vaccination. The examiner noted that a single vaccination limitation would sufficiently distinguish the invention over the prior art. *Id.* at 1053-54. The prosecuting attorney amended three of the claims to recite "single administration," but did not so amend the remaining claims. *Id.* at 1054. In accompanying remarks, the attorney inaccurately described all the claims as "restricted to a single vaccination scheme." *Id.* Reviewing this prosecution history, the Federal Circuit held that the claims control over a loose remark in the course of prosecution, noting that the claims themselves control and that it is not for the courts to say that they contain limitations which are not in them. *Id.* Likewise, this Court here cannot import the "encryption" limitation, as the Defendants urge, when such a limitation is conspicuously absent from the claims. Accordingly, the Court construes the term "transmit" to mean "the sending of data electronically."

The Defendants have also objected to the Magistrate Judge's construction of the term "verify," arguing that the construction may invite unintended application. The argument essentially is to the effect that the construction given the term by the Magistrate Judge is too broad. The Court agrees with the Magistrate Judge's construction of the term "verify" because it correctly represents the meaning of the term as it is used in the patent specification.

The Federal Circuit case of *Johnson Worldwide Assocs. v. Zebco Corp.*, 175 F.3d 985 (Fed. Cir. 1999) is instructive on this point. In that case, Zebco recognized that the ordinary meaning of the term "heading" connotes only direction, not limited to the direction of the trolling motor. Nevertheless, Zebco argued that the phrase "heading signal" refers only to the direction of the trolling motor. In support of that position, Zebco argued that, throughout the specification and prosecution history of the patent, the term "heading" in the context of the patent was limited to the direction of the trolling motor. The Federal Circuit rejected Zebco's position. First, it pointed out that the patent specification did not recite Zebco's proposed definition with reasonable clarity, deliberateness and precision. The Court then pointed to examples in the patent specification where the term "heading" was used to describe the direction of the boat as well as the direction of the trolling motor. Hence, the specification supported a broader interpretation of the term than was proposed by Zebco.

In this case, the Magistrate Judge has pointed to examples in the patent specification where the term "verify" is used in ways that suggest a broader meaning than that proposed by the Defendants. The specification does not describe with reasonable clarity, deliberateness and precision the definition proposed by the Defendants. Accordingly, the Court agrees with the Magistrate Judge's construction of the term "verify" for the reasons set forth in the Report and Recommendation and in this Order.

The Court is of the opinion that the findings and conclusions of the Magistrate Judge are correct. Therefore, the Court hereby adopts the Report of the United States Magistrate Judge as the findings and conclusions of this Court.

IT IS SO ORDERED.

SIGNED this 28th day of February, 2005.

DAVID FOLSOM
UNITED STATES DISTRICT JUDGE

IN THE UNITED STATES DISTRICT COURT
OF THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION

FILED
U.S. DISTRICT COURT
EASTERN DISTRICT OF TEXAS
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DATATREASURY CORPORATION	§	
	§	
V.	§	**No. 5:02CV95**
	§	
INGENICO S.A., *d/b/a* GROUPE	§	
INGENICO, and INGENICO, INC.	§	

DATATREASURY CORPORATION	§	
	§	
V.	§	**No. 5:02CV124**
	§	
J.P. MORGAN CHASE & CO.,	§	
J.P. MORGAN CHASE BANK,	§	
AFFILIATED COMPUTER SERVICES,	§	
INC., and ACS IMAGE SOLUTIONS,	§	
INC.	§	

DATATREASURY CORPORATION	§	
	§	
V.	§	**No. 5:03CV39**
	§	
FIRST DATA CORPORATION, FIRST	§	
DATA MERCHANT SERVICES CORP.,	§	
TELECHECK SERVICES, INC. *d/b/a*	§	
TELECHECK INTERNATIONAL, INC.,	§	
and MICROBILT CORPORATION	§	

REPORT AND RECOMMENDATION OF THE UNITED STATES MAGISTRATE JUDGE

This Report and Recommendation applies to each of three cases brought by DataTreasury Corporation against several defendants for patent infringement and addresses issues of claim construction regarding U.S. Patent No. 5,910,988 ("the '988 patent") and U.S. Patent No.

6,032,137 ("the '137 patent"). The parties have fully briefed these issues, and the Court heard oral argument on July 13, 2004.

The parties requested the Court divide the claim construction issue into two phases, and the Court agreed to do so. In the first phase, the Court determined which disputed claim terms would be construed according to 35 U.S.C. § 112, ¶ 6. In the second phase, the Court will construe all disputed claim terms, including any claim terms subject to § 112, ¶ 6.

Claim construction is a matter of law for the Court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Claims define the scope of the patentee's right to exclude and, thus, serve an important public notice function. *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 951 (Fed. Cir. 1993) (function of claims is putting "competitors on notice"). The public must be able to ascertain the meaning of claims from the "undisputed public record" – the claim language, the specification and the prosecution history. *See Markman*, 52 F.3d at 979.

"When construing claims, "[w]e first look to the claims themselves and turn next to the written description and the prosecution history, which should always be considered to construe the language of the claims." *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1366 (Fed. Cir. 2001). *See also Astrazeneca AB v. Mutual Pharmaceutical Co.*, No. 04-1100, 2004 WL 2186672 (Fed. Cir. Sept. 30, 2004) ("the goal of claim construction is to determine what an ordinary artisan would deem the invention claimed by the patent, taking the claims together with the rest of the specification.").

Though courts frequently rely on technical and general usage dictionaries to ascertain the ordinary meaning of the claim terms, *Texas Digital Sys. V. Telegenix, Inc.*, 308 F.3d 1193, 1204 (Fed. Cir. 2002), the specification must be consulted during the claim construction process.

SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1341 (Fed. Cir. 2001) (claim terms are limited to the invention contemplated by the patent specification, "[e]ven though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question."). Indeed, the specification must be analyzed to discern the meaning of a claim term that lacks a plain and ordinary meaning. *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 2004 WL 2034085 *5 (Fed. Cir. 2004). Further, the specification should always be analyzed to determine if claim terms are redefined or subject matter disclaimed. *See ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1090-91 (Fed. Cir. 2003) (The presumption of ordinary meaning "will be rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope").

The specification or prosecution history may explicitly or implicitly redefine a claim term. *See Int'l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1369-70 (Fed. Cir. 2004); *Texas Digital*, 308 F.3d at 1204; *Bell Atlantic Network Serv., Inc. v. Covad Communications Group, Inc.*, 362 F.3d 1258, 1268 (Fed. Cir. 2001). Further, claim scope may be disclaimed or disavowed by statements made in the specification or in the file history. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004); *Texas Digital*, 308 F.3d at 1204. *See also Shumer v. Laboratory Computer Sys., Inc.*, 308 F.3d 1304, 1313 (Fed. Cir. 2002) (citation omitted) ("[T]he prosecution history limits even clear claim language so as to exclude any interpretation that was surrendered during prosecution, but only where the accused infringer can demonstrate that the patentee surrendered that interpretation 'with reasonable clarity and deliberateness.'"); *Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc.*, 214 F.3d 1302, 1308

(Fed. Cir. 2000) ("Claims that have been narrowed in order to obtain issuance over the prior art cannot later be interpreted to cover that which was previously disclaimed during prosecution").

Extrinsic evidence may also be considered if needed to assist in determining the meaning or scope of the terms in the claims. *Kopykake Enterprises, Inc. v. Lucks Co.*, 264 F.3d 1377, 1381 (Fed. Cir. 2001). Where the claim language and the intrinsic evidence fail to resolve ambiguity in a claim, a court may consider extrinsic evidence – expert testimony and prior art – to resolve the ambiguity. *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1119 (Fed. Cir. 2002) ("[R]esolution of ambiguity arising from the claims and specification may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention.").

CLAIM TERMS TO BE CONSTRUED

1. Remote

The Defendants propose differing constructions for the word "remote," apart from the phrase "remote data access subsystem" as a whole. In particular, Defendants First Data and Ingenico propose that the word be construed as "at a distance away and separate from a central and/or intermediate subsystem or location." Defendant J.P. Morgan Chase ("JPMC") proposes that the word "refers to a site where a transaction is initiated, in contrast to the site from where the data processing services are provided, *i.e.*, the central data processing subsystem." The Plaintiff argues that the word should not be construed separately from the phrase as a whole. In addressing the word "remote" in the context of the whole phrase, the Plaintiff argues that the remote data access subsystem "is referred to as remote by the inventor because it requires a communication network to communicate with the central data processing subsystem(s)."

The phrase "data access subsystem" is used without the word "remote" in, for example, the last paragraph of claim 1 of the '988 patent and claim 1 of the '137 patent, and the plain claim language suggests that the word "remote" describes a characteristic of the "data access subsystem," namely, that of being "remote" from the "central" data processing subsystem. Moreover, the word "remote" is used in other claims (for example, claims 26 and 46 of the '988 patent and claim 26 of the '137 patent) apart from the phrase "data access subsystem."

Webster's Third New International Dictionary (1986) defines "remote" as "separated by intervals greater than usual: far apart"; "far removed in space, time, relation, or likeness: not near or immediate: far, distant." Alternatively, that source defines the term as "at a distance." Exhibit 11 to Defendants' Joint Claim Construction Brief.

The patent specification uses the word consistent with its normal sense, in that it indicates that the "data access subsystem" is separated from, or located away from, the central processing subsystem. For example, at col. 1, lines 10-15,[1] the specification states that the invention "pertains to an automated system to retrieve transaction data at remote locations, ... to transmit the encrypted data to a central location, ... and to transmit the informative reports to the remote locations." At col. 3, lines 58-60, the specification states "[i]t is a further object of the DataTreasury System to retrieve both paper and electronic transactions at remote locations." In describing the overall system, at col. 5, lines 2-9, the specification indicates that "[a]t the bottom tier, the DATs 200 retrieve data from the customer sites.... At the top tier, the DPCs 600 poll the DACs 400 to receive data which accumulates in the DACs 400.... The DPCs 600 store the customer's data in a central location, generate informative reports from the data and transmit the informative reports to the customers at remote locations." At col. 5, line 27, the specification states the "DATs 200 are located at customer sites." In the specification, the DAT 200 is connected to an intermediate data collecting subsystem by way of a wide area network (WAN), referred to in the specification as a Telco Carrier Cloud 412. The '988 patent, FIG. 4. The intermediate data collecting subsystem is also connected to the central data processing subsystem by way of the Telco Carrier Cloud 412. The '988 patent, FIG. 4; col. 12, line 62 – col. 13, line 3. According to the specification:

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[1] Unless indicated otherwise, references and citations to the patent specification are to the '988 patent specification, as the two specifications of the two patents-in-suit are largely identical.

> carriers provide communication services at local central offices. These central offices contain networking facilities and equipment to interconnect telephone and data communications to other central offices within its own network or within networks of other carriers.

The '988 patent, col. 12, line 65 – col. 13, line 3. Thus, the DATs are in locations physically separated from, or located away from, the DPCs.

The prosecution history contains no clear disavowal of the ordinary meaning of the term "remote." While the prosecution history includes several instances where the Applicant relied on the "remote" aspect of the "data access subsystem" to distinguish prior art, those instances use the term consistently with its ordinary meaning and do not demonstrate a clear disavowal of the plain meaning. For example, in the prosecution of the application leading to the '988 patent, in a Petition to Make Special, filed October 23, 1998, the Applicant argued that "Nally '978 does not include any form of data access subsystem that is remote from a central processing subsystem and linked by communication network." In that same document, the Applicant distinguished a prior art reference to Bedmar, saying "[i]n substantial contrast, the present application provides a communication network for transmitting images to a central data processing subsystem for processing, sending and verifying paper transaction data which is captured at remote locations." Exhibit B to Plaintiff's Reply Brief. Thus, while the Applicant argued that a "communication network" is a limitation distinguishing the claimed invention from the prior art, he did not disavow the ordinary meaning of the term "remote."

In the application leading to the '137 patent, in a Petition to Make Special, filed February 16, 1999, the Applicant argued that Behera "lacks any remote image capture and does not disclose any sort of information sharing network. Additionally, there is no encryption system in place between remote subsystems." Exhibit C to Plaintiff's Reply Brief. Again, the Applicant argued that various prior art references failed to show certain features, but he did not disavow the ordinary meaning of "remote."

The Plaintiff argues that the remote data access subsystem "is referred to as remote by the inventor because it requires a communication network to communicate with the central data processing subsystem(s)." The Plaintiff submitted the Declaration of Dr. Macready to the effect that devices that are connected directly together would not be considered to be "remote" from one another. However, Dr. Macready did not opine that devices connected together by way of a communication network are necessarily "remote" from one another. Hence, interconnection by way of a "communication network" is not necessarily the defining aspect of the word "remote." And claim 1 of the '988 patent, for example, recites a communication network for the transmission of data between the remote data access subsystem and the central data processing subsystem. Therefore, the requirement of a communication network is in addition to the "remote" nature of the data access subsystem.

The specification uses the word "remote" in its ordinary sense and contains no special definition for the word. The prosecution history also suggests that the word is used in its ordinary sense, and it contains no clear disavowal of the ordinary meaning. The Court finds nothing in the specification or prosecution history that limits or alters the ordinary meaning of the term "remote." Hence, the word "remote" will be construed to mean "at physically separate locations; not near or immediate; distant."

2. Subsystem

The Court defines this term as "an organization of computer components that comprises a functional unit that is part of a larger system." See Order dated February 19, 2004, at page 10.

3. Data Access Subsystem

The Plaintiff DataTreasury proposes this phrase be construed to mean "a functional unit of a larger system that can be used to obtain from or to put data in storage wherein the functional unit communicates with at least one central data processing subsystem by a communication network." The Defendants propose the phrase should be construed as "a subsystem, including, at a minimum, 'an imaging subsystem' and 'a data access controller.' The data access subsystem is programmed to capture paper transaction data from receipts and other documents, and encrypt, store [verify in the '137 patent] and send the paper transaction data and subsystem identification information to a central data processing subsystem."

Claim 1 of the '988 patent (and several of its dependent claims) and claims 1 and 42 of the '137 patent (and several claims depending from claim 1) include this phrase, and each of those claims sets forth various functions to be performed by the data access subsystem. Each of those claims also recites that the data access subsystem comprises an imaging subsystem and a data access controller.

None of the parties has submitted a definition for the phrase "data access subsystem," as a whole, from a dictionary or treatise. The Court has construed the word "subsystem" to mean "an organization of computer components that comprises a functional unit that is part of a larger system." The phrase "data access" suggests providing or obtaining access to data. In the context of the claims in which this phrase appears, the "data access subsystem" is a "subsystem" (as defined above) that obtains data and provides access to data by way of an imaging subsystem.

Specifically, the claims recite that the "data access subsystem" performs functions of "capturing and sending paper transaction data," and the "data access subsystem" comprises an imaging subsystem "for capturing the documents and receipts" ('988 patent) or "checks" ('137 patent) and a data access controller "for managing the capturing and sending of the transaction data." Thus, the "data access subsystem" obtains data and provides access to that data.

However, construing a "data access subsystem" in the context of the '988 and '137 patent claims to simply require obtaining data and providing access to that data would be an overbroad construction, as such an interpretation would not adequately distinguish the data access subsystem from the data processing subsystem. The "data access subsystem" is described in the patent specification as that collection of computer components and peripheral devices that facilitate the input of transaction data into the system. And the claims explicitly require that the "data access subsystem" include an imaging subsystem for capturing the documents and receipts, or checks. Thus, the "data access subsystem" is a subsystem that provides for the input of transaction data into the overall system and provides that data to other parts of the overall system.

This understanding of the phrase is confirmed by the patent specification, which indicates that data access subsystems "retrieve data from the customer sites." The '988 patent, col. 5, lines 2-3. In a preferred embodiment, the data access subsystem includes a scanner, a modem, digital storage, a controller, a card interface, a printer and a signature pad. The '988 patent, col. 5, lines 34-38. These components enable the obtaining of transaction data and the providing of that data to other subsystems in the overall system. The '988 patent, col. 5, lines 46-48; col. 6, lines 20-35; col. 7, lines 31-45.

The Plaintiff's proposed construction includes at least one feature that is separately recited in the claims – communication between the data access subsystem and the data processing subsystem by way of a communication network. While the Plaintiff argues this feature describes what it means to be "remote," that word has been separately construed by the Court above. The Defendants' proposal to include "at a minimum, 'an imaging subsystem' and 'a data access controller'" in the construction of this phrase is unnecessary, as those specific components are explicitly recited in the claims as being components of the "data access subsystem."

The Court will construe the phrase "data access subsystem" as meaning "a subsystem that provides for the input of transaction data into the overall system and provides that data to other parts of the overall system."

4. Imaging Subsystem

The Defendants propose that this phrase should be construed as "a subsystem that receives paper receipts and other documents as input, and whose output is an image of the receipts and other documents in digital electronic form." The Plaintiff proposes the phrase should be construed as "a functional unit of a larger system (or subsystem) that uses software and equipment to put images into digital format, or to compress, store, or retrieve an image." The Plaintiff relies on a statement found in this Court's Order of February 19, 2004, in which the Court quoted from Cyber Dictionary: Your Guide to the Wired World, by David Morse, 1966, stating "the term *imaging system* refers to the software and equipment used to put images into digital format, or to compress, store, or retrieve an image." The Court also stated in that Order that "the term [imaging subsystem] connotes software and equipment used to put images into digital format, or to compress, store, or retrieve images…."

Defendant JPMC argues that the Defendants' proposed definition flows from considering the entirety of the claim element. Relying on several passages from the specification of the '988 patent and the '137 patent, JPMC argues that the only device described that could capture documents and receipts is a scanner, although JPMC does not propose that claim 1 be limited specifically to a scanner. Defendants First Data and Ingenico argue that the phrase "imaging subsystem" within the remote data access subsystem refers to an optical capture device, such as a scanner, and not merely to the basic computer functionalities of storing or retrieving image data. All the Defendants point to the language in the claim requiring that the "imaging subsystem" is "for capturing the documents and receipts."

The Defendants also point out that the Plaintiff's proposed construction is so broad as to encompass devices that have nothing to do with imaging. For example, the Defendants argue that the Plaintiff's proposed construction would encompass a device that merely stores an image, even though the claim language itself requires image capture.

This Court's Order of February 19, 2004 addresses the issue of whether certain claim terms from the '988 patent and the '137 patent should be construed according to 35 U.S.C. § 112, ¶ 6, *i.e.*, as "means plus function" claim elements. In that Order, the Court was not providing a construction for the term "imaging subsystem," rather the Court was only addressing whether that term connotes sufficient structure so as to not be subject to 35 U.S.C. § 112, ¶ 6. The Plaintiff's proposed construction for "imaging subsystem" is overly broad in that it would include software and equipment that merely stores an image or merely retrieves an image, for example. In the context of the claims of the '988 patent and the '137 patent, the "imaging subsystem" is a subsystem that receives documents and receipts (the '988 patent) or checks (the '137 patent) and provides an output that is an image of the documents and receipts, or checks, in digital electronic form.

5. Central Data Processing Subsystem

The Plaintiff proposes this term should be construed as "a functional unit of a larger system that performs input processing, storage output, or control functions to accomplish a sequence of operations on data wherein the functional unit communicates with one or more remote data access subsystems via a communication network." The Defendants propose this term should be construed to mean "a computer system for centralized execution of processing, sending, verifying and storing paper transaction data captured at and sent from remote data access subsystem[s]. The central data processing subsystem operates independently of the remote data access subsystem[s]." The Plaintiff relies primarily on this Court's Order of February 19, 2004, although the Plaintiff adds a requirement that the central data processing subsystem "communicates with one or more remote data access subsystems via a communication network." The Defendants rely primarily on the claim language itself, together with certain excerpts from the patent specifications.

In its Order of February 19, 2004, the Court addressed the term "data processing subsystem" to determine whether that claim term should be construed as a "means plus function" claim element. In so doing, the Court cited from the IEEE Standard Dictionary of Electrical and Electronics Terms, 6th edition, which defined a "data processing system" as "a system, including computer systems and associated personnel, that performs input processing, storage output, and control functions to accomplish a sequence of operations on data." In the phrase "central data processing subsystem," the word "central" plainly suggests a centralized subsystem, or a subsystem for centralized data processing.

While the claims of the '988 patent and '137 patent generally call for a "communication network," the phrase "central data processing subsystem" does not in itself encompass or necessarily require that limitation. Also, while certain claims of the '988 patent and '137 patent are directed to the transmission of "paper transaction data" from remote data access subsystems to a central data processing subsystem, other claims address the sending of "data" between the remote data access subsystems and the central data processing subsystem. Finally, to require that the central data processing subsystem "operates independently of" the remote data access subsystems, to the extent that requirement is understood, is without support in the intrinsic record and would simply introduce ambiguity and uncertainty into the claim construction process.

In the patent specification, the DPC 600 stores customer data in a central location, generates informative reports from the data and transmits the informative reports to the customers at remote locations. The '988 patent, col. 5, lines 6-9. The DPC 600 "accumulates, processes and stores images for later retrieval" by customers who have authorization to access the information. The '988 patent, col. 14, lines 20-22. The DPC 600 "performs data mining and report generation for a wide variety of applications by returning information from the data base." The '988 patent, col. 19, lines 65-67.

The Court will construe the phrase "central data processing subsystem" as "a subsystem for centralized execution of processing, sending and storing data received from one or more remote data access subsystems."

6. **Management Subsystem For Managing The Processing, Sending And Storing Of The Transaction Data**

The parties treat the terms "management subsystem" and "data management subsystem" as synonymous. The function to be performed by the "management subsystem" is "managing the processing, sending and storing of the transaction data." The Plaintiff proposes that this phrase should mean "a functional unit of a larger system that can perform various functions on data including at least one or more of the following: define data, create data, manipulate data, control data, manage data, and use data." The Defendants propose that the subject claim phrase should mean "a subsystem which manages the processing, sending, verifying and storing of the paper transaction data." Thus, the dispute between the parties regarding this phrase relates to the functions to be performed by the management subsystem.

Each of the parties' proposed constructions includes concepts that are not included within the claim phrase in dispute. For example, the Plaintiff proposes that the subsystem can perform one or more various functions in addition to managing data, including defining data, creating data, manipulating data, controlling data and using data. The Defendants propose that the subsystem manages not only the processing, sending and storing of data, but also the verifying of data. Again, the function recited for the management subsystem is that of managing the processing, sending and storing of the transaction data. The Plaintiff's proposed construction would encompass a subsystem that did nothing more than, for example, use data. The Defendants' proposed construction would require that the subsystem verify the data, imposing an additional function not recited in the disputed claim phrase.

The Court will construe the phrase "management subsystem for managing the processing, sending and storing of the transaction data" to mean "a subsystem that manages the processing, sending and storing of the transaction data," as those terms are defined in this Report and Recommendation.

7. Data Collecting Subsystem

The Plaintiff contends that this phrase refers to "a functional unit of a larger system that can transfer data from one or more points to a central point." The Defendants argue that a "data collecting subsystem" is "a subsystem which downloads and stores encrypted optically recorded images of receipts and documents representing financial transactions and encrypted subsystem identification information corresponding to each image from each remote data access subsystem it polls, and uploads this information to the central data processing subsystem." Claim 18 of the '988 patent and claim 18 of the '137 patent each call for a "data collecting subsystem for collecting and sending the electronic or paper transaction data."

The specifications of the patents-in-suit use the phrase "data collecting subsystem" to describe a DataTreasury System Access Collector (DAC) 400 as part of an overall system. The DAC 400 polls the remote data access subsystems to receive and collect data that has accumulated in those subsystems. The DAC 400 then passes the collected data to the central data processing subsystem. The '988 patent, col. 5, lines 3-9. Throughout the specifications, the DAC 400 is consistently described as including a server or servers that collect data from remote data access subsystems and then forward that data to a central data processing subsystem.

The Court will construe the phrase "data collecting subsystem" to mean "a subsystem that receives data from remote data access subsystems and transmits that data to a central data processing subsystem."

The Defendants contend that claim 18 of the '988 patent and claim 18 of the '137 patent are each invalid under 35 U.S.C. § 112 because the phrase "the electronic data" is vague and indefinite for lack of antecedent basis and for claiming in the alternative. The Plaintiff responds that the terms "electronic transaction data" and "paper transaction data" are "inherent components" of the term "transaction data" appearing in claim 1 (from which claim 18 depends). The Plaintiff argues that the Patent and Trademark Office Manual of Patent Examining Practice (MPEP) states that "[i]nherent components of elements recited have antecedent basis in the recitation of the components themselves." The Plaintiff also cites to *Bose Corp. v. JBL Inc.*, 274 F.3d 1354, 1359 (Fed. Cir. 2001). Defendant JPMC points out that, in connection with claim 45, the Plaintiff has argued that "electronic transactions" and "paper transactions" are distinct and refer to different types of transactions. See Claim Construction Sur-Reply of Defendant JPMC, p. 18.

Claim 1 of each of the patents-in-suit refers to "paper transaction data." Hence, in claim 18, the phrase "the paper transaction data" finds antecedent basis in claim 1, from which claim 18 depends. "Electronic transaction data" is not explicitly referenced in claim 1 of the patents.

From claim 45 of the '988 patent, it is clear that "electronic transactions" involve such things as "credit cards, smart cards and debit cards," whereas "paper transactions" involve "documents and receipts." The specifications of the '988 and '137 patents also refer to "paper and electronic records," as well as to an "electronic transaction card (UET card) or smart card" and "paper receipts." The '988 patent, col. 1, lines 40-45 and col. 2, lines 13-22; the '137 patent, col. 1, lines 46-52 and col. 2, lines 20-29.

From the claims and the specification, it is clear that "electronic transaction data" refers to transaction data or information contained in or reflected in a machine-readable medium, such as a credit card, a smart card or a debit card. The appearance of the word "the" before this phrase does not render the claim invalid for indefiniteness in view of the clear meaning from the specifications and at least claim 45 of the '988 patent. The Court declines to hold claim 18 of the '988 patent or claim 18 of the '137 patent invalid for claiming in the alternative, as the scope of the claims is easily determined.

8. Subsystem Identification Information

The Defendants argue that this phrase should be defined as "information which identifies a remote data access subsystem." The Plaintiff proposes that the phrase should mean "identification of at least an aspect of a remote data access subsystem." In particular, the Plaintiff argues that "other subsystem information can be identified including an imaging subsystem." Thus, says Plaintiff, the plain and ordinary meaning of the phrase is "information that identifies one or more remote data access subsystems and/or at least one imaging subsystem."

Claim 1 of the '988 patent calls for "one or more remote data access subsystems … comprising at least one imaging subsystem … and at least one data access controller." The claim also requires that the data access subsystem provides "encrypted subsystem identification information … to the data processing subsystem." Claim 1 of the '137 patent calls for "one or more remote data access subsystems for capturing and sending paper transaction data including … and further including subsystem identification information comprising at least one imaging subsystem … and at least one data access controller…." The claim also requires that the data access subsystem provides "encrypted subsystem identification information … to the data processing subsystem." Claim 42 of the '137 patent calls for "one or more remote data access subsystems … comprising at least one imaging subsystem … and at least one data access controller." The claim also requires that the data access subsystem provides "encrypted subsystem identification information … to the data processing subsystem."

The parties appear to differ in their proposed constructions as to whether the identification relates to the "remote data access subsystem" or simply "an aspect of a remote data access subsystem," for example, an imaging subsystem. The three independent claims just mentioned each call for a remote data access subsystem that comprises at least an imaging subsystem and a data access controller. From the language of the claims, the "subsystem" that is being identified would appear to be satisfied by either the remote data access subsystem or the imaging subsystem.

The specifications of the patents-in-suit describe several identifiers used in connection with the described embodiments. For example, an image may be tagged "with a time stamp which includes the scanning time, an identification number to identify the merchant originating the scan and any additional useful information." The '988 patent, col. 8, lines 14-17. At col. 9, lines 41-43, the '988 patent describes a terminal ID that "identifies the credit card terminal which is used to print the credit card receipt." At col. 10, lines 31-33, the '988 patent describes a "DAT_TERMINAL_ID," that "uniquely identifies the DAT 200 which is used by the customer." Thus, the patent specification does not indicate that the "subsystem identification information" should be limited to the remote data access subsystem itself or the imaging subsystem which is one component of the remote data access subsystem.

The Court will construe the phrase "subsystem identification information" to mean "information that identifies the remote data subsystem or a subsystem that is a part of the remote data access subsystem."

9. Data Access Controller

The Plaintiff proposes that the "data access controller" is "a part of a subsystem that functions as a regulating mechanism to obtain data from or to put data in storage." The Defendants propose that the term refers to "a network computer running an operating system that supports multi-processing, memory management and dynamic linking and executes software for manag[ing] the 'capturing' function of a peripheral 'imaging subsystem' and manag[ing] the sending of data between the peripheral and the system."

The Court discussed this claim term at pages 17-21 of its Order of February 19, 2004. In that Order, the Court considered definitions for the word "controller" taken from several sources, including at least two technical dictionaries. The Court concluded that the term "controller" connotes structure for interfacing between a computer and an instrument or peripheral, for controlling the transfer of data between a computer and a peripheral device, for facilitating use of a peripheral device by a computer, and for controlling a circuit or system. The Court went on to say that a "controller" cooperates with a computer or system to perform a variety of tasks, including receiving instructions from a computer, reformatting the instructions, programming a peripheral device, controlling the transfer of data from the computer to a peripheral device and vice versa, aiding the computer in the computer's use of the peripheral, and controlling the peripheral. The dictionary definitions of the term "controller" make it clear that a controller can be an interface between a computer and a peripheral, thus having the capability to communicate with either device. In the context of the claims at issue, the "data access controller" manages the "capturing" function of a peripheral "imaging subsystem" and manages the sending of data between the "imaging subsystem" and the overall system. The patent specification describes a "DAT controller" that is associated with the data access subsystem. The '988 patent, col., 5, lines 30-39 and col. 7, lines 31-33. This controller is identified as a workstation that performs processing tasks and Input/Output (I/O) tasks that are typically performed by a processor. The DAT controller compresses, encrypts and tags the bit map image to form a tagged encrypted compressed bit map image (TECBI). The DAT controller also manages the Input/Output (I/O). In particular, the DAT controller manages various devices that collect and send transaction data and that together make up the data access subsystem, devices such as a scanner, a digital storage, an optional printer, and a modem. The '988 patent, col. 5, lines 32-39 and col. 7, lines 31-40.

From the sources considered by the Court in its Order of February 19, 2004, a "controller" may sometimes take the form of a single computer chip or a separate circuit board. In the specification of the patents-in-suit, the DAT controller is a workstation that performs processing tasks and Input/Output (I/O) tasks that are typically performed by a processor. From both the sources reviewed by the Court in its Order of February 19, 2004, and from the specifications of the patents-in-suit, the "controller" is an interface device between various peripherals in the data access subsystem and the other components of the overall processing and storage system.

Thus, the Court will construe the term "data access controller" to mean "a computer chip, a circuit board, or a computer that interfaces between the imaging subsystem and the remainder of the overall claimed system, and controls the operation of the imaging subsystem."

The Defendants argue that the "data access controller" must run "an operating system that supports multi-processing, memory management and dynamic linking." The Defendants find support for this proposal at col. 5, lines 39-45, of the '988 patent (and corresponding portion of the specification from the '137 patent). That passage describes an alternative for designing the DAT 200 shown in Figure 2 of the patent. Details of such embodiments should not generally be incorporated into the construction of claim terms, and the Court finds no justification to incorporate such details into the construction of the term "data access controller."

10. Paper Transaction Data, Transaction Data, Data

The Defendants all argue that the proper construction for "paper transaction data" is "data including, at a minimum, an image of the paper receipts and other documents captured by the imaging subsystem." Plaintiff argues that the phrase should be given its plain and ordinary meaning and, although the phrase would include what the Defendants describe, the term is not limited to that type of data. Plaintiff urges that the term "paper transaction data" should mean "transaction data from content and/or information on a paper document."

The Defendants point out that the specification of the patents-in-suit focuses on capturing images of documents, receipts and checks used in paper-based transactions, including information contained in those paper documents, and that the invention includes a scanner to retrieve data from paper transactions. The Defendants also point to the prosecution history, and in particular to Petitions to Make Special that were filed in the applications leading to the '988 and '137 patents, to argue that the Applicants distinguished the claimed invention from various prior art references, at least in part, based on the failure of the prior art to show the transmission of images in the system. Therefore, argue the Defendants, the Applicant unambiguously required that an image of the paper receipts and other documents used in paper-based transactions be included in the "paper transaction data."

With respect to claims 1 and 26 of the '137 patent, the Defendants argue that these claims place additional limitations on the term "paper transaction data." In particular, the Defendants argue that the claims expressly require that the "paper transaction data" includes various information that would be found on a check. The Defendants propose that these additional requirements set forth in claims 1 and 26 of the '137 patent be included within the construction of the term "paper transaction data" for purposes of those claims.

The Defendants argue that the term "data," as used in claims 42 and 46 of the '988 patent, should be construed to mean "data, including at least paper transaction data." As support for this proposed construction, the Defendants point to the Petition to Make Special filed in the application of the '988 patent in which the Applicant stated that he "believed that all claims are directed to a single invention." The Applicant then proceeds to distinguish his claimed invention from various prior art references. The Defendants argue that the statements made by the Applicant "require the inclusion of at least paper transaction data in the claims."

With respect to claim 43 of the '137 patent, the Defendants argue that the term "transaction data" should be construed to mean "transaction data, which includes at least paper transaction data." For support, the Defendants point to the Petitions to Make Special that were filed in both the '988 patent application and the '137 patent application, along with various statements made by the Applicant in those petitions.

The Plaintiff responds that, while "paper transaction data" can include an image of a paper transaction document, it does not have to include such an image, nor is it limited to being an image of a paper transaction document. According to the Plaintiff, the Defendants have provided no support as to why the phrase must always include an image in view of disclosure in the patent specification concerning the capturing of an image from various input/output devices, not as paper transaction data. The Plaintiff argues that the specification discusses images separately from data, and that the Defendants' reliance on the Petitions to Make Special is misplaced in that statements made in those petitions were not made for the purposes of construing any terms such as "paper transaction data."

Plaintiff argues there is a difference between the capturing and sending of paper transaction data and the capturing of documents and receipts by an imaging subsystem. That is, the imaging subsystem captures an image of documents and receipts, but this capture is not the same as the capturing of paper transaction data, which can be the information on a document or receipt but does not require the captured image to be a component of the paper transaction data.

The '988 and '137 patents relate to "an automated system to retrieve transaction data at remote locations...." The specifications and the claims are directed to the capture and transmission of information related to transactions. The specifications recognize several different types of "data" that can be involved in transactions – paper transaction data, electronic transaction data, biometric data and signature data. The '988 patent, col. 5, lines 35-39 and 46-48; col. 6, lines 20-50. Each of these "data" types is related to a transaction of one type or another, and, therefore, they are each a form of "transaction data."

The specifications of the patents-in-suit speak separately of "images" and "data." See, for example, the '988 patent, col. 11, lines 44-48 ("...the DAC server 402 inserts images and data received from the DATS 200 into a database..."). The specifications describe the use of a scanner to scan a paper receipt and generate an image. That image is processed at the data access subsystem and then sent to the central data processing subsystem. The patents also describe capturing electronic transaction data, as from a credit card, a smart card or a debit card, at the data access subsystem. The '988 patent, col. 3, lines 31-35; col. 6, lines 20-30. The specifications also describe the capture of other data, such as biometric data and signatures, at the data access subsystem. The '988 patent, col. 6, lines 33-36 and 46-50. Thus, both images and non-image data are transmitted to the central data processing subsystem.

Nevertheless, in the specifications, the only form in which "paper transaction data" is transmitted by the system is image form. Paper receipts and documents are scanned and bitmap images are formed, and this is the only method described in the specifications for capturing "paper transaction data." Indeed, the patents denigrate prior art methods that required the handling of paper. The '988 patent, col. 1, line 45 – col. 2, line 12. Moreover, during the prosecution of each of the '988 and '137 patents, the Applicant distinguished the prior art patent to Bedmar on the basis that, while Bedmar captured images of checks at remote sites, it only transmitted the codelines from the checks, rather than transmit the captured images, to a central location. The Applicant commented that "[i]n substantial contrast, the present application provides a communication network for transmitting images to a central data processing subsystem for processing, sending and verifying paper transaction data which is captured at remote locations." Although at that point in the prosecution of the '988 patent, the independent claims contained no reference to "images" or an "imaging subsystem," after the claims were rejected in an Office Action dated December 29, 1998, the Applicants responded by amending each of the independent claims to add a requirement of capturing an image of paper transaction data or an image of documents and receipts.

Claim 1 of each of the '988 and '137 patents calls for "one or more remote data access subsystems for capturing and sending paper transaction data," where the remote data access subsystem comprises an "imaging subsystem for capturing the documents and receipts" (the '988 patent) or "checks" (the '137 patent). Claim 26 of each patent calls for "capturing an image of the paper transaction data" and "sending a captured image of the paper transaction data." The "documents and receipts" and "checks" evidence "paper transactions" (the '988 patent, col. 1, lines 18-28), and the information on the "documents and receipts" and "checks" is information related to those paper transactions. The claims require capturing the documents and receipts, or data, in the form of an image, and the image is transmitted from the remote data access subsystem to the central data processing subsystem. This interpretation is consistent with the specifications that describe how documents, receipts and checks are scanned at the remote data access subsystem to form images that are then compressed, encrypted and tagged before being transmitted to the central data processing subsystem. This interpretation is further supported by the prosecution history of the '988 and '137 patents. The Applicant cited the prior art patent to Bedmar, acknowledging that Bedmar described the scanning of checks at a remote site and storage of the images at that remote site. Instead of transmitting the images to a central location, Bedmar transmitted only the codelines, *i.e.*, information on the checks, from the checks. The

Applicant distinguished Bedmar, saying that "[i]n substantial contrast, the present application provides a communication network for sending images to a central data processing subsystem for processing, sending and verifying paper transaction data which is captured at remote locations."

Thus, the Court will construe the phrase "paper transaction data" to be information concerning a transaction reflected on a paper document, where the "paper transaction data" includes an image of the paper document when it is transmitted from the remote data access subsystem.

The term "transaction data," in general, encompasses more than simply "paper transaction data." In general, "transaction data" is information concerning or relating to a transaction. The '988 and '137 patents describe several different types of "transaction data," including paper transaction data, electronic transaction data, biometric data and signature data. As noted above, the specifications of the '988 patent and the '137 patent distinguished between "paper transaction data" and "electronic transaction data." "Electronic transaction data" involves, for example, credit cards, smart cards and debit cards, and refers to information contained in or reflected in a machine-readable medium, such as a credit card, a smart card or a debit card. From the specification, "paper transaction data" involves information contained in or reflected in paper, such as documents, receipts and checks. Biometric data includes facial scans, fingerprints, voice prints, iris scans, retina scans and hand geometry. The '988 patent, col. 6, lines 46-50. Signature data may also be captured at the remote data access subsystem. The '988 patent, col. 6, lines 33-36.

The term "transaction data" is used throughout the claims of both the '988 patent and the '137 patent. In certain instances, the term is used in its generic sense to include any or all types of transaction data – paper, electronic, biometric and signature. In other instances, the term is used to refer to a specific type or specific types of transaction data. When the term "transaction data" is used in the claims without an accompanying definite article (*e.g.*, "the" or "said"), it should be understood to encompass any type of transaction data and not be limited to "paper transaction data." When the term is used with a definite article (*e.g.*, "the" or "said"), it should be understood to refer to the type or types of transaction data for which there is an antecedent in the claim.

For example, claim 1 of each patent refers to "managing the capturing and sending of the transaction data," "storing the transaction data" and "transmission of the transaction data." In these instances, "the transaction data" is the "paper transaction data" recited earlier in the claim. As another example, claim 9 of each patent refers to a server "for polling … for transaction data." In this instance, because the specification contemplates that all types of transaction data may be transmitted from the remote data access subsystem, there is no basis for limiting "transaction data" in claim 9 to one particular type (*e.g.*, paper transaction data). Claim 9 later calls for "storing the transaction data," as well as other recitals of "the transaction data," references back to the generic "transaction data" earlier in that claim. As yet another example, claim 18 of each patent refers to "the electronic or paper transaction data" and later recites "the transaction data." Because the claim makes reference to two types of transaction data – electronic and paper – "the transaction data" should be understood to encompass both types. Other examples could be given, but these should suffice to illustrate that the term "transaction data," with or without a definite article, must be understood within the context of the particular claim under consideration.

Like the term "transaction data," the word "data," from the patent specifications, includes paper transaction data as well as electronic transaction data. The word also encompasses biometric data and signature data. Therefore, the word "data" must be understood from the context of the claims in which it appears.

From the claims, it is clear that the word "data" means "transaction data." Claim 34 of each patent recites "wherein said transmitting transaction data step comprises the steps of: transmitting data...; transmitting data...; etc. Thus, "transmitting transaction data" involves "transmitting data." See also claim 38 of each patent. Also, claim 44 of the '988 patent refers to "transmitting the transaction data," and the antecedent for that phrase is "transmitting data" in claim 42. Likewise, claim 49 of the '988 patent refers to "packaging the transaction data," and the antecedent for that phrase is "data" found in the preamble of claim 49 as well as in claim 46. These instances clearly indicate that the word "data" in the '988 and '137 patent claims refers to "transaction data," and the word "data" should be construed in the same manner as the phrase "transaction data."

11. Processing

Certain claims of the '988 patent and the '137 patent call for the central data processing subsystem to process paper transaction data and the subsystem identification information. Other claims simply call for processing transaction data. The Plaintiff proposes that the term "processing" simply means "processing." The Defendants propose that the term should mean "the systematic performance of operations upon the paper transaction data and subsystem identification information, in contrast to the overhead operations implicit in the sending, verifying and storing operations of the central data processing subsystem." For support, the Defendants point to various excerpts from the patent specifications and certain technical sources.

The Tech Encyclopedia, cited by the Defendants, states that processing data "refers specifically to processing the actual data of the business (raw number crunching) in contrast to the processing overhead of the operating system and networks. In many instances, the computer does very little data processing compared to the processing required by the operating system, graphical interface and other infrastructure components." In the '988 patent, Figure 8 illustrates a flowchart "describing the data processing performed by the DPC 600." The '988 patent, col. 20, lines 66-67. The specification then describes how the DPC 600 handles data it has received from a remote data access subsystem. See the '988 patent, col. 20, line 66 – col. 21, line 32. Consistent with the description in the Tech Encyclopedia, this description in the specification relates to the processing of the actual data received from the remote data access subsystem as distinguished from operation of the central data processing subsystem related to communication on the network and other overhead operations.

Therefore, the Court will construe the term "processing," as it relates to transaction data, paper transaction data and subsystem identification information, as "the performance of operations upon data and information, in contrast to the processing overhead of the operating system and networks."

12. Sending

The Plaintiff DataTreasury contends this term is clear and means "send." The Defendants contend the term means "transmission [of paper transaction data and subsystem identification information] over a communication network." Claim 1 of the '988 patent and claim 1 of the '137 patent recite "sending paper transaction data and subsystem identification information," while claim 26 of each patent recites "sending a captured image of the paper transaction data." Claim 1 of each patent also calls for a "communication network for the transmission of the transaction data," but claim 26 of each patent does not specify a particular medium for "transmitting the transaction data."

The Plaintiff DataTreasury concedes that "this claim term does imply the transfer of data and 'sending of paper transaction data' through electronic means." Plaintiff's Reply Brief on Claim Construction, p. 46. But the Plaintiff argues that new language should not be introduced into the claim term. The specifications of the '988 and '137 patents, in their Background sections, denigrate prior art approaches involving the physical delivery of paper documents and receipts from customers to data archive service companies, as well as the delivery of magnetic tapes from customer sites to the central facility. The '988 patent, col. 1, line 58 – col. 2, line 12; the '137 patent, col. 1, line 65 – col. 2, line 19. Both patents describe a communication network as a medium for sending data and information to a central facility. That is, the "sending" operation is performed electronically, not physically, and the patents distinguish the two methods.

While the specifications of the patents-in-suit plainly describe that "sending" data and information is by way of electronic means, claim 26 of each patent does not specify the particular mechanism for "sending." Accordingly, the Court will construe the word "sending" in the context of the claims of the '988 patent and the '137 patent to mean "sending electronically."

13. "Transmission" and All of Its Forms, Including "Transmit" and "Transmitting"

The Plaintiff proposes that these terms mean "to send data through the system." The Defendants argue that the phrases should mean "the sending of data electronically. Data sent between subsystems or locations must be encrypted." These terms are used in the claims to describe the movement of data and information within and/or between various subsystems or locations. For the reasons stated above in connection with the term "sending," the term "transmission" in the context of the '988 and '137 patents refers to electronic transmission, or sending electronically.

The Defendants urge that "data sent between subsystems or locations must be encrypted," citing the '988 patent prosecution history, and specifically Applicant's Response of February 5, 1999. The Court will not read this limitation into the terms "transmission," "transmit" or "transmitting." In the Response of February 5, 1999, the Applicant amended all four independent claims then pending, those claims finally issuing as claims 1, 26, 42 and 46 of the '988 patent. In those amendments, all four independent claims were amended to include a limitation related to capturing images of documents and receipts, but only two of those claims were amended to add any limitation regarding encryption. In the statement cited by the Defendants, the Applicant recites at least two or three features, including remote imaging and encrypted communications. Although that statement in itself might be construed as arguing that all the recited features, in combination, are the bases for patentability of the claims, in view of the actual claim amendments made (encryption added to two claims but not to two others), the statement may as readily be interpreted as arguing three bases for patentability, any one of which was believed to be a basis for patentability. Therefore, the Court cannot hold that the Applicant clearly disavowed the meaning of the terms as otherwise discerned from the intrinsic record. Moreover, in the Office Action to which the Applicant was responding, the Patent Office Examiner pointed out that several of the prior art references each "show encrypted financial networks employing some type of key based comparison for authorization of a specific transaction." This observation by the Examiner suggests he did not intend that allowance of the claims could be obtained by requiring encrypted communications between subsystems.

The Court will construe the term "transmit" and all of its form to mean the sending of data electronically.

14. Verifying

The Plaintiff proposes the term "verifying" should mean "verifying; authenticate." The Defendants propose that the word should be construed as "confirming the correctness of by comparison to a known and trusted stored copy of the same data."

Webster's Third International Dictionary (1986), cited by the Defendants, includes several definitions of the word "verify," all of which are very similar. For example, that source defines "verify" to mean "to prove to be true; establish the truth of; conclusively demonstrate by presentation of facts or by sound reasoning or argument." That source also defines the word to mean "to check or test the accuracy or exactness of; confirm the truth or truthfulness of by or as if by comparison with known data or a recognized standard or authority." Finally, that same source defines "verify" to mean "to confirm or establish the authenticity or existence of by examination, investigation, or competent evidence."

The terms "verify" and "verification" are used several times throughout the specifications of the '988 patent and the '137 patent. For example, at col. 8, lines 35-38, under certain circumstances, "the DAT controller 210 asks the operator to verify the number of scanned receipts in step 334. If the number of scanned receipts as determined by the DAT controller 210 does not equal the number of scanned receipts as determined by the operator,..." the DAT controller 210 will take certain action. At col. 13, lines 26-28, of the '988 patent, the specification indicates that "the DAC 400 will verify that the DAT 200 is ready to transmit in step 508." At col. 14, lines 62-64, of the '988 patent, the specification states that "the workstation 604 also performs identification verification by comparing signature data retrieved remotely by the DATs 200 with signature data stored at the DPC 600." At col. 15, lines 1-9, the specification goes on to state that "as is known to persons of ordinary skill in the art, the workstation 604 could execute other software to perform identification verification by comparing biometric data including facial scans, fingerprints, retina scans, iris scans and hand geometry. Thus, the DPC 600 could verify the identity of a person who is making a purchase with a credit card by comparing the biometric data captured remotely with the biometric data stored at the DPC 600." Finally, at col. 20, lines 21-23, of the '988 patent, the specification states that "the DPC 600 will verify that the DAC 300 is ready to transmit in step 708." As an example from the claims of the '988 patent, claim 33 calls for "comparing the captured signature data and the captured biometric data to stored signature data and stored biometric data respectively for identification verification."

In each of the above quoted instances, the terms "verify" and "verification" are used in their ordinary sense to mean "to prove to be true; establish the truth of; to check or test the accuracy or exactness of." In certain instances, the specification and the claims set forth how verification might be accomplished, for example, as by comparing captured data to stored data. But in other instances, no "comparison" appears to be involved. See, for example, the '988 patent, col. 13, lines 26-28 and col. 20, lines 21-23. Thus, the specification uses the term "verify" to include confirming the authenticity of by comparison to known information or data, as well as simply confirming the accuracy or authenticity of.

The Court will construe the term "verifying" to mean "checking or testing the accuracy, exactness or authenticity of."

15. At Least One Communication Network for the Transmission of the Transaction Data Within and Between Said One or More Data Access Subsystem and Said at Least One Data Processing Subsystem

The Plaintiff proposes that this term means "a structured connection of computer systems and/or peripheral devices, one or more remote from the others, exchanging data as necessary to perform the function of the connection." Defendant JPMC proposes that a "communication network is a secure network with encrypted communications between [remote data access and central data processing] subsystems or locations. The communication network consists of terminals, nodes, and interconnection media whereby a plurality of sources of information are able to convey that information to at least one of a plurality of destination nodes." Defendant JPMC proposes that "within and between indicates that the central data processing subsystem and the remote data access subsystem at each remote subsystem have their own respective network boundaries and that there is a communication network that bridges any one remote subsystem with the central subsystem. Within means within a network at a given subsystem or location and between means between the networks of at least the remote subsystem or location and the central subsystem or location." Defendants First Data and Ingenico propose that "communication network means a connection of geographically separated communications devices via transmission channels. The communication network is a secure network with encrypted communications between subsystems or locations." First Data and Ingenico also propose that "within and between means both inside of and between."

Claim 1 of the '988 patent and claim 1 of the '137 patent each call for "at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem." From this phrase, it is clear that the "at least one communication network" provides for the transmission of transaction data within each of the one or more data access subsystems and within the at least one data processing subsystem. It is also clear that the "at least one communication network" provides for the transmission of transaction data between one or more of the data access subsystems and the data processing subsystem. Hence, in this phrase, the term "within" indicates that transaction data may be transmitted within a given subsystem, *i.e.*, between the various components comprising the subsystem. The term "between" means that transaction data may be transmitted from one subsystem to another subsystem.

Defendants First Data and Ingenico offer a definition for the term "communications network" from an ANSI/AIIM technical report dated 1998. That source defines "communications network" to mean "connection of geographically separated communications devices via transmission channels."

Because at least some of the claims provide that transaction data may be transmitted within a given subsystem by way of the communication network, the communication network is not limited to a connection of "geographically separated" devices. Claim 16 confirms that the communication network is not limited to "geographically separated" devices. Claim 16, which depends from claim 1, recites that the communication network comprises first and second "local area networks" and at least one "wide area network." In claim 16, the local area networks are used for transmitting data within a given subsystem, and the wide area network is used for transmitting data between subsystems. This understanding is confirmed by the specifications of the patents-in-suit. See, for example, the '988 patent, col. 11, lines 19-22; col. 11, lines 33-38; col. 12, lines 17-18; col. 12, lines 28-36; col. 12, line 62 – col. 13, line 3; col. 15, lines 52-54. See, for example, the '137 patent, col. 11, lines 35-40; col. 11, lines 49-54; col. 12, lines 33-34; col. 12, lines 44-54; col. 13, lines 11-19; col. 15, line 66 – col. 16, line 1. There is no suggestion in the specifications that the components of a subsystem connected to a local area network are "geographically separated." In fact, the clear suggestion in the specification is that these components are not "geographically separated." Therefore, the "communication network" must facilitate data transmission between devices that are geographically separated as well as between devices that are not geographically separated.

The Defendants contend that the term "communication network" should be construed as a "secure network with encrypted communications." As support, the Defendants point to the Response, dated February 5, 1999, filed by the Applicant during prosecution of the '988 patent. In that Response, the Applicant amended independent claims 1, 26, 42 and 46. The claims 1 and 26 were amended to require the capture of an image of documents and receipts (or paper transaction data) and to require that the transaction data be encrypted. The Applicant amended claim 42 to require an imaging subsystem for capturing images of documents and receipts, and he amended claim 46 to call for "capturing an image of documents and receipts and extracting data therefrom." Neither of claims 42 or 46 were amended to require encryption. In the Remarks section of the Response, the Applicant argued that "none of the cited references disclose, teach or suggest a secure network for document processing based on a remote image capture of paper transaction data, with encrypted communication between subsystems. Therefore, the present application presents amended claims 1, 26, 42 and 46 that clearly define the present invention over any of [the applied prior art references]." As discussed previously, in view of the specific claim amendments made in the Response, this remark by the Applicant does not represent a clear disavowal of the ordinary meaning of "communication network."

The Court will construe the phrase "communication network" to mean a connection of computers and/or devices to facilitate the transmission of data between the computers and/or devices, for example, a local area network or a wide area network. The Court will construe the phrase "within and between said one or more data access subsystems and said at least one data processing subsystem" to mean that the communication network facilitates the transmission of transaction data within the one or more data access subsystems, and within the data processing subsystem, and it also facilitates the transmission of transaction data between the various subsystems.

16. External Communication Network

This phrase is found in claim 40 of the '988 patent and claim 40 of the '137 patent. In particular, claim 40 of the '988 patent states that "transmitting data from each intermediate location to corresponding central locations" includes "connecting each intermediate location to an external communication network" and "connecting the corresponding central locations to the communication network." From the language of claim 40 and the claims from which claim 40 depends, the plain meaning of the term "external communication network" is a communication network that is external to the remote locations, the central location and the intermediate location. That is, the "external communication network" is that network, or portion of network, that interconnects the three locations, as distinguished from the network, or portion of network, that interconnects the components at any one of those locations.

17. Encrypt

The Plaintiff argues that the word "encrypt" refers to "a process of transforming data into an unintelligible form in such a way that the original data either cannot be obtained or can be obtained only by using a decryption process." The Defendants contend that the word should mean "the transformation of data into a form unreadable by anyone without a secret decryption key. Its purpose is to ensure privacy by keeping the information hidden from anyone for whom it is not intended."

The specifications of the '988 and '137 patents state that "[e]ncryption protects against unauthorized access during the subsequent transmission of the data…." The '988 patent, col. 8, lines 6-8; the '137 patent, col. 8, lines 13-15. The specifications distinguish encryption from encoding and from data compression. The '988 patent, col. 5, line 58 – col. 6, line 6 ("...the Xerox DataGlyph™ Technology represents digital information with machine readable data which is encoded into many tiny individual glyph element.... Further, encryption methods, as known to persons of ordinary skill in the art encrypt the data represented by the DataGlyph™ Technology."); col. 7, line 61 – col. 8, line 11 ("...the DAT controller 210 executes a conventional image compression algorithm like the Tagged Image File Format (TIFF) program to compress the BI ... the DAT controller 210 executes an encryption algorithm which is well known to an artisan of ordinary skill in the field to encrypt the CBI...."). A "tag header" is a part of the TECBI that is transmitted to the central data processing subsystem. This "tag header" includes "the encryption keys" that are used to decrypt the encrypted, compressed image. The '988 patent, col. 21, lines 3-8.

Plaintiff DataTreasury submitted a definition for "encrypt" from the IBM Dictionary of Computing (1994), defining the term to mean "to encode or encipher." That source defines "encipher" as "(1) To scramble data or to convert data to a secret code that masks the meaning of the data to any unauthorized recipient. Synonymous with encrypt (I). (2) In computer security, to convert plain text into an unintelligible form by means of a cipher system. Synonymous with cipher." That source also defines "encode" to mean, among other definitions, "in computer security, to convert plain text into an unintelligible form by means of a code system."

Defendants First Data and Ingenico submitted a definition for "encryption" from Newton's Telecom Dictionary (1997), which defines the term to mean "the transformation of data into a form unreadable by anyone without a secret decryption key. Its purpose is to ensure privacy by keeping the information hidden from anyone for whom it is not intended." Other sources offered by Defendants First Data and Ingenico include the Collins Dictionary of Personal

Computing (1996) ("The transformation of text or other data into coded form, often compressed in addition, making it more secure"), and Computing Dictionary – The Illustrated Book of Terms and Technologies (1996) ("The act of encoding a file for the purpose of preventing others from gaining access to its contents.").

As already noted, the specifications of the patents plainly distinguish between "encryption," "encoding" and "compression." Therefore, a broad construction of "encrypt" to encompass "encode" or "compress" would effectively ignore the distinctions made in the specifications.

The Court will construe the word "encrypt" to mean "the transformation of data into a form unreadable by anyone without a secret decryption key. Its purpose is to ensure privacy by keeping the information hidden from anyone for whom it is not intended."

18. Scanner

The Plaintiff contends that a "scanner" is "one type of imaging subsystem that puts images into digital format." The Defendants contend that a "scanner" is "a hardware device that captures an optical image and converts it into an electronic format where the image is represented as binary data." The parties agree that a scanner converts an image into an electronic format or puts an image into digital form.

The Court will construe the word "scanner" to mean "a hardware device that captures an optical image and converts it into an electronic format where the image is represented as binary data."

19. Server

The Plaintiff proposes that the term "server" be construed to mean "a computer whose role in a network is to provide services and resources to users," citing the Microsoft Encyclopedia of Networking, 2nd Edition (2002). The Defendants propose that the term should mean "a network device that provides services to the network users by managing shared resources." The Defendants cite a number of technical sources as support for this definition, including the Microsoft Encyclopedia of Networking, 1st Edition (2000).

The Microsoft Encyclopedia of Networking, both the first and second editions, define a "server" to be "a computer whose role in a network is to provide services and resources to users." Throughout the specification of the patents-in-suit, the term "server" refers to a computer that provides services and resources to users that are connected to the server. See the '988 patent, FIGS. 4 and 6; col. 5, lines 6-9; col. 11, lines 22-24 and 30-33; col. 14, lines 20-27 and 31-37; col. 16, lines 38-45. Moreover, nothing in the prosecution history suggests any disavowal of the ordinary meaning of the term.

The Court will construe the term "server" to mean "a computer whose role in a network is to provide services and resources to users."

20. Polling

The parties agree that "polling" involves interrogation of devices for purposes such as avoiding contention, determining operational status, or determining readiness to send or receive data. The parties appear to disagree as to whether that interrogation must be "sequential." The Defendants cite to the American Standard for Telecommunications – Telecom Glossary (2000), which states that polling is a process in point-to-point or multi-point communications "whereby stations are invited one at a time to transmit." That source goes on to state that polling "involves sequential interrogation of devices...." The Plaintiff cites to the IBM Dictionary of Computing (1994) for support. That source also states that "polling" is, "on a multi-point connection or a point-to-point connection, the process whereby data stations are invited one at a time to transmit." That source goes on to state that "polling" involves "interrogation of devices...." Thus, the sources cited by Plaintiff and Defendants indicate that "polling" involves interrogation of devices one at a time.

The specification uses the term "polling" to indicate that a server interrogates one device at a time to determine if it is ready to transmit data and, after receiving data from one station, the server interrogates the next device, and this process continues until all devices have been interrogated. See the '988 patent, FIGS. 5 and 7; col. 5, lines 3-6; col. 11, lines 15-16; col. 12, lines 10-11; col. 13, line 16 – col. 14, line 3; col. 14, lines 11-18; col. 20, lines 11-65.

The Court will construe the term "polling" to mean "the interrogation of devices one at a time for various purposes, such as avoiding contention, determining operational status, or determining readiness to send or receive data."

21. A Domain Name Services Program For Dynamically Assigning One Of Said At Least One Server To Receive Portions Of The Transaction Data For Balancing The Transaction Data Among Said At Least One Server

The Plaintiff contends that a "domain name services program" is "a program which can translate domain name services to IP addresses." The Defendants contend that the disputed phrase refers to "a program that dynamically resolves the host names of multiple servers into IP addresses, for balancing the load of the paper transaction data being received among the multiple servers."

According to the specification of the patents-in-suit, a Domain Name Services (DNS) was known to persons of ordinary skill in the art as of the filing date of the applications, and a DNS "statically translates name requests to Internet Protocol 4 (IP4) addresses." The '988 patent, col. 11, lines 62-65. The specification goes on to state that "an enhanced DNS dynamically assigns IP4 addresses to balance the load among the servers comprising the DAC server

402." The '988 patent, col. 11, lines 65-67. Also, at col. 12, lines 6-9, the '988 patent specification says "[b]ased on these load performance statistics, the enhanced DNS adjusts the mapping of name requests to IP4 addresses to direct data toward the servers which are more lightly loaded." The disputed claim phrase explicitly calls for "dynamically assigning" a server to receive portions of the transaction data for balancing the transaction data among the server or servers.

The Court will construe this phrase to mean "a program that dynamically resolves the host names of the one or more servers into IP addresses, for balancing the transaction data among the one or more servers."

22. Predefined Template

The Plaintiff contends this phrase should mean "a predefined pattern used as a guide or reference," citing the Magistrate Judge's Report and Recommendation dated August 19, 2003. The Defendants contend that a "predefined template" is "a set of values and rules that dictate how captured images are partitioned into panels (image snippets) to be separated from the rest of the image."

The phrase "predefined template" is found in, for example, claim 14 of the '988 patent. That claim recites that the "predefined template" is "for partitioning the stored transaction data into panels and identifying locations of the panels." Because the claims explicitly recite the functions of the predefined template, those functions need not be separately recited in the definition of the term itself. Also, there is no requirement in the claims that panels are "to be separated from the rest of the image."

In the specification, various tables "implement the document partitioning algorithm." For example, one table "defines the location of forms on a predefined document." Another table "defines the location of panels within the forms of a predefined document." Yet another table "defines the location of fields within the panels of a form of a predefined document." The '988 patent, col. 19, lines 50-64. Thus, it is plain from the patent specifications that a predefined template is simply a predefined pattern used as a guide or a reference. The function served by the predefined template is as set forth in the claims.

The Court will construe the term "predefined template" to mean "a predefined pattern used as a guide or reference."

23. Data Entry Gateway for Correcting Errors in the Panels of Stored Transaction Data

The Plaintiff argues that the "data entry gateway is part of the data processing subsystem which corrects errors in the panels of stored transaction data." The Defendants contend that the data entry gateway is "a computer that acts as a node between two networks operating under different protocols. This particular gateway allows the central data processing subsystem to forward images of documents and receipts to a data entry terminal on another network to correct errors created by incorrect character recognition of image segments." In the claims, the data entry gateway performs the function of correcting errors in the panels of stored transaction data.

The word "gateway," according to one technical dictionary, is "a term for a broad category of network components that allow communication between different networking architectures and different protocols … they are commonly used to provided connectivity between two different protocol stacks that might be running on different systems … a gateway is usually a dedicated device or a set of services running on a dedicated computer. Gateways are essentially devices that direct network traffic in some fashion and translate that information." Microsoft Encyclopedia of Networking (2000). The IEEE Standard of Electrical and Electronics Terms, 6th Edition, defines "gateway" as "a functional unit that interconnects a local area network (LAN) with another network having different higher layer protocols; … a dedicated computer that attaches to two or more networks and that routes packets from one to the other; … in networking, a device that connects two systems that use different protocols." Thus, the dictionary definitions for the term "gateway" all refer to a dedicated computer, or other device, that connects two systems or networks that use different protocols or connects between two or more networks and routes packets from one network to another. The construction proposed by the Defendants is generally consistent with the technical dictionary definitions.

The '988 patent specification refers to a "Remote Data Entry Gateway" that "correct(s) errors which occurred during data capture by the DAT 200." The function recited in the claims for the data entry gateway is that of "correcting errors." The '988 patent specification also states that "the operator at the Remote Data Entry Gateway 614 … only needs to correct the portion of the document or image snippet which contained the error." The specification goes on to state that "the DPC Server 602 only sends the portion of the document containing the error to the Remote Data Entry Gateway 614 or to the Remote Offsite Data Entry Facilities 616. Since the operator at these data entry locations only sees the portion of the document which contained the error, she can quickly recognize and correct the error." Thus, the patent specification uses the phrase "data entry gateway" to refer to a device at a "data entry location" that an operator can use to correct information in a document or a portion of a document, much like a data entry terminal or data editing terminal. The specification does not indicate that the "Remote Data Entry Gateway 614" forwards images or image snippets to another device or another network. Rather, the specification clearly states that image snippets needing correction may be sent to the Remote Data Entry Gateway 614 or to the Remote Offsite Data Entry Facilities 616, and both of those devices "correct errors." The '988 patent, col. 15, lines 21-34.

The specification does not use the term "data entry gateway" in a manner consistent with the ordinary meaning of the term "gateway." If the specification of a patent uses words in a manner clearly inconsistent with the ordinary meaning of a dictionary definition, the inconsistent dictionary definition must be rejected. *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 208 F.3d 1193, 1204 (Fed. Cir. 2002). The specification of the patents-in-suit uses the term "data entry gateway" to refer to a device at a data entry location that is connected to a network to facilitate data correction by an operator. Therefore, the Court will construe the phrase "data entry gateway for correcting errors in the panels of stored transaction data" to mean "a device that is connected to a network and may be used by an operator to correct errors in panels of stored transaction data."

24. Network Switch

The Plaintiff proposes that a "network switch" is "a device that controls the flow of data within a network." The Plaintiff relies on the Court's Order of February 19, 2004, as well as the Microsoft Encyclopedia of Networking, 2nd Edition. The Defendants propose that a "network switch" is "a data-link layer device that transfers frames between connected networks." The Defendants also rely on the Microsoft Encyclopedia of Networking, 2nd Edition (2002). The phrase is found in claim 25 of each of the patents-in-suit. For example, claim 25 of the '988 patent calls for "a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network."

The Microsoft Encyclopedia of Networking, cited by the Plaintiff and the Defendants, defines "switch" to be "any device that can control the flow of electrical signals." This general definition is followed by a more specific definition appropriate for the context of the '988 and '137 patents. That reference states that, "in the context of high-speed Ethernet networks, the term *switch* refers to an Ethernet switch, also called a local area network (LAN) switch or simply a switch. … In general, when referring to controlling data flow within a network, the term *switch* describes any data-link layer device that transfers frames between connected networks."

In the specifications of the patents-in-suit, both the intermediate data collecting subsystem and the central data processing subsystem employ a 100 Base T/10 Base T protocol, which is based on Ethernet. The '988 patent, col. 12, lines 17-22 and col. 15, lines 52-57. In the intermediate data collecting subsystem, a Cisco Catalyst 2900 Network Switch is employed, and in the central data processing subsystem, a Cisco Catalyst 5500 Network Switch is employed. These network switches support the LAN connectivity between the various devices connected to their respective LANs. The '988 patent, col. 12, lines 23-27 and col. 15, lines 59-61. Thus, the function recited in the claims for the network switch, the description in the patent specifications concerning the network switch, and the more specific definitions found in the technical reference cited by all the parties are all consistent, with the observation that the network switch as described in the specifications "supports the LAN … connectivity between the devices connected to the LAN."

The Court will construe the term "network switch" to be "a data-link layer device that transfers frames between connected networks or between devices connected to a network."

25. Capturing an Image of the Paper Transaction Data

Both claims 26 of the '988 patent and the '137 patent call for "capturing an image of the paper transaction data." Claim 26 of the '988 patent is directed to "a method for central management, storage and verification of remotely captured paper transactions from documents and receipts," whereas claim 26 of the '137 patent is directed to "a method for central management, storage and verification of remotely captured paper transactions from checks." The parties do not dispute the meaning of the phrase "capturing an image of." Instead, in the case of each claim, the parties dispute the subject of the "capturing."

The Defendants contend that the subject of the "capturing an image of" phrase is "receipts and other documents representing a financial transaction" in the '988 patent, and "checks" in the '137 patent. The Plaintiff argues the claims plainly call for capturing an image of "the paper transaction data," and the phrase should not be so limited as proposed by the Defendants. The Court has already addressed the meaning of the phrase "paper transaction data" above. In particular, the preamble of claim 26 in the '988 patent refers to "remotely captured paper transactions from documents and receipts," and the "capturing" element of the claim refers to "the paper transaction data." The reference to "the" paper transaction data in the body of the claim refers back to the recitation in the preamble of the claim to "paper transactions from documents and receipts." Moreover, a plain reading of the claim leads to the conclusion that "the paper transaction data" is a reference to "paper transactions from documents and receipts" in claim 26 of the '988 patent.

With regard to claim 26 of the '137 patent, the preamble refers to "remotely captured paper transactions from checks," and the "capturing" element of that claim refers to "the paper transaction data." Again, the reference in the body of this claim to "the" paper transaction data is a reference back to the "paper transactions from checks" in the preamble of that claim. As before, this conclusion is confirmed by a plain reading of the claim.

The Court's construction of the term "paper transaction data," set out earlier, will apply here. In the case of claim 26 of the '988 patent, the "paper transaction data" is "from documents and receipts." In the case of claim 26 of the '137 patent, the "paper transaction data" is "from checks." Therefore, "capturing an image of the paper transaction data" in claim 26 of the '988 patent means capturing an image of the documents and receipts. In claim 26 of the '137 patent, "capturing an image of the paper transaction data" means capturing an image of the checks.

26. Capturing An Image of Documents and Receipts and Extracting Data Therefrom

This phrase is found in claim 46 of the '988 patent. The Plaintiff contends the phrase simply means "capturing an image from paper transactions and extracting data therefrom." The Defendants contend that the phrase means "capturing, at a remote subsystem, documents and receipts and creating an image of the documents and receipts. Extracting means deriving information from a source. Thus, data is extracted from the image of the documents and receipts." The issues with respect to this phrase appear to be whether the "capturing" must occur "at a remote subsystem" and from what is the data extracted.

The natural reading of this claim phrase suggests that the data is extracted from the image that is captured from the documents and receipts. The Plaintiff appears to agree that the data is extracted from the image. In its Reply Brief, at p. 53, Plaintiff states "an image is captured and data therefrom is extracted."

The preamble of claim 46 refers to "transmitting data within and between one or more remote subsystems, at least one intermediate subsystem and at least one central subsystem." The claim first calls for "capturing an image … and extracting data therefrom," then recites several "transmitting" steps, where "data" is transmitted within and between the various subsystems enumerated in the preamble. The claim does not specifically recite that the "capturing" step is performed "at a remote subsystem." The steps in a method claim need not be performed in the order of their recitation in the claim, absent some indication dictating a specific order. Thus, the Court will not read a location into the "capturing" step of claim 46.

The Court will construe this phrase to mean "capturing an image of documents and receipts and extracting data from the image."

27. Managing The Capturing And Sending Of The Transaction Data

The Plaintiff argues that this phrase "is self-evident and requires no further construction." Plaintiff's Reply Brief, p. 47. The Defendants argue that the phrase means "executing software on a workstation, for controlling the input/output operations of the device(s) that captures the image of the documents and receipts, and for sending it."

In the context of claims 26 of both the '988 patent and the '137 patent, the function of "managing the capturing and sending of the transaction data" is performed by a computer, a controller, or other similar device. This function is not performed by a human. In the patent specification, a controller that is a part of the data access subsystem manages the "capturing" function of an "imaging subsystem" and manages the sending of data between the "imaging subsystem" and the system. In the specification, this controller is identified as a workstation that performs processing tasks and Input/Output (I/O) tasks that are typically performed by a processor. In particular, the controller manages various devices that collect and send transaction data and that together make up the data access subsystem. The '988 patent, col. 5, lines 32-39 and col. 7, lines 31-40.

Hence, in the context of claim 26 of the '988 patent and claim 26 of the '137 patent, the phrase "managing the capturing and sending of the transaction data" means "managing, by way of a computer, a controller, or other device, the operation of the device or devices that capture an image of the paper transaction data and send the captured image."

28. Collecting and Sending the Electronic or Paper Transaction Data at Intermediate Locations

The Defendants contend that claim 36 of the '988 patent and claim 36 of the '137 patent, each of which includes this claim phrase, are invalid under 35 U.S.C. § 112 because "the electronic data" is vague and indefinite for lack of any antecedent basis, and for claiming in the alternative. The Plaintiff contends that the term "electronic transaction data" is an inherent component of the term "transaction data," and inherent components of elements recited are recognized as having antecedent basis, citing *Bose Corp. v. JPL Inc.*, 274 F.3d 1354, 1359 (Fed. Cir. 2001). The Plaintiff contends that the term "transaction data" found in claim 26 (from which claim 36 depends indirectly) provides the antecedent basis for the "electronic transaction data."

The phrase "the electronic transaction data" does not find antecedent basis in claim 26. Any reference in claim 26 to data is to "the paper transaction data" and, subsequently, "the transaction data." There is no suggestion in claim 26, claim 29 or claim 36, prior to the subject phrase, of "electronic transaction data."

However, from claim 45 of the '988 patent, it is clear that "electronic transactions" involve such things as "credit cards, smart cards and debit cards," whereas "paper transactions" involve "documents and receipts." The specifications of the '988 and '137 patents also refer to "paper and electronic records," as well as to an "electronic transaction card (UET card) or smart card" and "paper receipts." The '988 patent, col. 1, lines 40-45 and col. 2, lines 13-22; the '137 patent, col. 1, lines 46-52 and col. 2, lines 20-29.

From the claims and the specifications, it is clear that "electronic transaction data" refers to information contained in or reflected in a machine-readable medium, such as a credit card, a smart card or a debit card. The appearance of the word "the" before the phrase does not render the claim invalid for indefiniteness in view of the clear meaning from the specifications and at least claim 45 of the '988 patent. The Court declines to hold claim 36 of either the '988 patent or the '137 patent invalid for claiming in the alternative, as the scope of the claims is easily determined.

29. Transmitting the Transaction Data Within The Intermediate Location

This phrase is found in claim 36 of the '988 patent and claim 36 of the '137 patent. The Plaintiff contends the phrase means simply "transmitting the transaction data." The Defendants contend that the phrase means "transmitting the encrypted, captured images of receipts and other documents representing financial transactions and corresponding encrypted subsystem identification information inside the intermediate location."

The Court has previously defined the term "transmitting" and the phrase "transaction data." This phrase thus calls for transmitting the transaction data "within the intermediate location." The phrase means that the transaction data is transmitted inside the intermediate location.

30. Transmitting Data From Each Remote Location to Corresponding Intermediate Locations

This phrase is found in claim 46 of the '988 patent. The Plaintiff contends the phrase means that "data is transmitted from each intermediate location to corresponding central locations." The Plaintiff's contention appears to be unintentional, as Plaintiff uses this same proposed construction in connection with another phrase to be discussed below. The subject phrase plainly calls for transmitting data "from each remote location to corresponding intermediate locations," not "from each intermediate location to corresponding central locations." The Defendants contend the phrase means "the data, which includes the image, is transmitted from any one remote subsystem to the intermediate subsystem servicing that remote subsystem, after it is first encrypted."

The Court has previously defined the words "transmitting" and "data," and those constructions apply here. Thus, the Court will construe this phrase to mean "transmitting data," as those terms have been previously construed, from each remote location to the intermediate location that corresponds to or services that remote location.

31. Transmitting Data From Each Intermediate Location To Corresponding Central Locations

The Plaintiff contends this phrase, found in claim 46 of the '988 patent, means "data is transmitted from each intermediate location to corresponding central locations." The Defendants contend the phrase means "the encrypted data is transmitted from any one intermediate subsystem to the central subsystem servicing that intermediate subsystem."

The Court has previously defined the terms "transmitting" and "data," and those constructions will apply here. Therefore, the Court will construe this phrase to mean "transmitting data," as those terms have been previously defined, from each intermediate location to the central location that corresponds to or services that intermediate location.

32. The Preamble of Claim 42 of the '988 Patent

The Plaintiff argues that the preamble to claim 42 of the '988 patent is not a limitation and is therefore not subject matter for construction. The Defendants argue that various elements recited in this preamble constitute limitations. The Defendants argue that if the elements recited in this preamble are not limitations, claim 42 is invalid under 35 U.S.C. § 112 for lack of clarity and written description. For example, throughout the body of the claim, there are references to the various elements recited in the preamble. Interestingly, the Plaintiff agrees "that the preamble is a claim limitation to the extent that the preamble distinguishes claim 42 over the prior art." Plaintiff's Reply Brief, p. 51.

The various elements found in the preamble of claim 42 constitute limitations for purposes of determining infringement as well as validity of claim 42. During prosecution of the '988 patent application, the Applicant amended the preamble to add "an imaging subsystem for capturing images of documents and receipts," and argued the patentable of this claim over the prior art on that basis. Hence, the Applicant relied on the preamble during prosecution to distinguish the claimed invention from the prior art. *Invitrogen Corp. v. Biocrest Mfg., LP*, 327 F.3d 1364 (Fed. Cir. 2003).

The various elements recited in claim 42 preamble have been previously defined by the Court.

33. At Least One First Local Area Network For Transmitting Data Within A Corresponding One Of Said One Or More Remote Subsystems

This phrase is found in claim 42 of the '988 patent. The Plaintiff contends the phrase refers to "a local area network (LAN) for transmitting data." The Defendants contend "this claim element requires that the components of each remote subsystem be interconnected through at least one first LAN so that data, which includes at least paper transaction data, can be transmitted through the LAN among the various components of the remote subsystem." The parties do not appear to dispute the meaning of the term "local area network" itself.

The Court has elsewhere in this Report and Recommendation construed the terms "transmitting" and "data." The plain language of this phrase requires at least one (*i.e.*, one or more) local area network for transmitting data within, *i.e.*, between components of, one of the remote subsystems. The phrase means each remote subsystem has associated with it "a corresponding" LAN for transmitting data between the components of that remote subsystem.

While claim 42 of the '988 patent, in its preamble, states that the "data processing subsystem" includes "an imaging subsystem for capturing images of documents and receipts," nowhere does the claim refer to "paper transaction data" or "transaction data." The only reference in the claim is to "data," and there is no indication that the "data" is the same as "images of documents and receipts" or even necessarily data from those documents and receipts. Also, claim 45, which depends from claim 42, provides that the "data" may be electronic transaction data or paper transaction data. Hence, "data" in claim 42 may be of either type.

The Court will construe this phrase to mean each remote subsystem has associated with it a local area network (LAN) for transmitting transaction data between the components of that remote subsystem.

34. Claim 45 of the '988 Patent

The Defendants contend that claim 45 of the '988 patent is invalid under 35 U.S.C. § 112 for claiming in the alternative. The Plaintiff contends that merely claiming in the alternative does not render a claim invalid for indefiniteness, citing several cases, including *Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001).

The Court finds that claim 45 is not invalid for claiming in the alternative. The scope of the claim is easily determined, and is supported by the description in the specification. For example, the specification indicates that data may be retrieved from credit cards, smart cards, and various biometric data. The '988 patent, col. 3, lines 31-36; col. 3, line 66 – col. 4, line 8; col. 6, line 20 – col. 7, line 10. The specification also indicates that data may be from paper transactions from documents and receipts. The '988 patent, col. 3, lines 31-36; col. 3, lines 61-65; col. 5, line 46, *et seq.*

35. Claim 49 of the '988 Patent

The Defendants contend that claim 49 of the '988 patent is invalid under 35 U.S.C. § 112 because "the transaction data" has no antecedent basis. The Plaintiff contends that an inherent component of the term "data," a term used throughout claim 46, from which claim 49 depends, is the term "transaction data" since transaction data refers to a particular type of data. Plaintiff's Reply Brief, p. 54.

The Court has previously indicated that the term "transaction data" in claim 49 finds antecedent basis in the word "data" found earlier in claim 49 and in claim 46, in that "data" means "transaction data." Thus, the Court declines to hold claim 49 invalid for lack of antecedent basis.

36. Claim 50 of the '988 Patent

The Defendants allege that claim 50 of the '988 patent is invalid under 35 U.S.C. § 112 for claiming in the alternative. The Plaintiff argues that, as in the case of claim 45 of the '988 patent, claim 50 is not invalid for claiming in the alternative for the same reasons claim 45 of the '988 patent is not invalid. For the reasons stated in connection with claim 45 of the '988 patent, the Court finds that claim 50 is not invalid for claiming in the alternative.

37. Paper Transaction Data Including A Payer Bank's Routing Number, A Payer Bank's Routing Information, A Payer's Account Number, A Payer's Check, A Payer Bank's Draft, A Check Amount, A Payee Bank's Identification Number, A Payee Bank's Routing Information, And A Payee's Account Number

This phrase is found in claim 1 of the '137 patent. The Plaintiff contends the phrase refers to "data and/or information contained on a check." The Defendants contend that "paper transaction data includes an image of the checks captured by the imaging subsystem and must include a payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee bank's identification number, a payee bank's routing information, and a payee's account number."

The Court has previously defined the phrase "paper transaction data" and that construction will apply here. This phrase from claim 1 of the '137 patent provides that the "paper transaction data," as previously construed by this Court, includes certain information as set forth in the claim phrase. As the parties do not appear to dispute the meaning of the individual components of the "paper transaction data" found in this phrase, the Court will not construe those terms.

38. [Paper] Transaction Data Including A Payer Bank's Identification Number, A Payer Bank's Routing Number, A Payer Bank's Routing Information, A Payer's Account Number, A Payer's Check, A Payer Bank's Draft, A Check Amount, A Payee Bank's Identification Number, A Payee Bank's Routing Information, And A Payee's Account Number

The phrase is found in claim 26 of the '137 patent, and the Plaintiff contends the phrase refers to "capturing and sending data and/or information contained on a check." The Defendants argue that the "paper transaction data" must include a payer bank's identification number, a payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee bank's identification number, a payee bank's routing information, and a payee's account number."

The Court has previously defined the term "paper transaction data," and that construction will apply here. The parties do not appear to dispute the various components included within this phrase that are included in the "paper transaction data," and the Court will not construe those various components.

39. A Central Location

This phrase is found in at least claim 26 of the '988 patent and claim 26 of the '137 patent. The Plaintiff argues that the phrase refers to "a location central for receiving and transmitting data." The Defendants contend the phrase refers to "a physical location that is remote from the location where the steps of capturing and managing occur."

Throughout the '988 patent and the '137 patent, certain apparatus is located at, and certain activities are performed at, "remote" locations. By contrast, other apparatus are located at, and other activities are performed at, "a central location." Thus, the "central location" is contrasted with the "remote locations." In the context of claim 26 of the '988 patent and claim 26 of the '137 patent, for example, the function of "capturing an image of the paper transaction data" occurs "at one or more remote locations." The functions of "collecting, processing, sending and storing the transaction data" occur "at a central location."

In the specification, the DATs are located at "remote locations" and the DPCs are at "a central location." The '988 patent, col. 5, lines 1-9. Thus, a "central location" is a location that is "central" with respect to the "remote locations." Or, in other words, a "remote location" is "remote" from a "central location." A "central" location is distinguished from a "remote" location, as the different modifiers in those phrases plainly suggest.

Thus, in the context of claim 26 of the '988 patent and claim 26 of the '137 patent, "a central location," where the functions of "collecting, processing, sending and storing the transaction data" occur, is a location that is different from the "remote locations," where the function of "capturing an image of the paper transaction data" is performed.

The construction offered by the Plaintiff does not distinguish the central location from the remote locations. For example, the remote locations receive data in the form of paper transaction data and they transmit that data. Therefore, "a location central for receiving and transmitting data" equally applies to the "remote locations" and the "central location" of claim 26.

The Court will construe the phrase "a central location" to mean "a location that is different from the remote locations where the function of capturing an image of the paper transaction data is performed."

40. Sending a Captured Image of the Paper Transaction Data

Claim 26 of the '988 patent and claim 26 of the '137 patent call for "sending a captured image of the paper transaction data." The Defendants contend that this phrase means "transmitting each image from the remote location after it has been encrypted." The Plaintiff contends the phrase means what it says, sending a captured image of the paper transaction data.

The Defendants argue that the term "sending" must refer to electronically sending encrypted data in view of the Applicant's representations to the Patent and Trademark Office in the Response dated February 5, 1999 in the prosecution of the '988 patent. In that Response, the Applicant amended claim 26 to add the requirement of "encrypting subsystem identification information and the transaction data." The Applicant then argued that "none of the cited references disclose, teach or suggest a secure network for document processing based on a remote image capture of paper transaction data, with encrypted communication between subsystems." Plaintiff concedes that claim 26 explicitly calls for encrypting the transaction data.

In general, the recited steps in a method claim (such as claim 26 of each of the '988 and '137 patents) need not be performed in a specific order unless the claim so requires. However, in view of the explicit requirement in claim 26 (of each of the two patents) of "encrypting ... the transaction data," where "the transaction data" is a reference to the earlier-recited "paper transaction data," and further in view of the Applicant's remarks in the Response dated February 5, 1999 regarding claim 26, the Court finds that, in claim 26 of the '988 patent and claim 26 of the '137 patent, the phrase "sending a captured image of the paper transaction data" means "sending a captured image of the transaction data after it has been encrypted."

41. With The Data Access Subsystem Providing Encrypted Subsystem Identification Information And Encrypted Paper Transaction Data To The Data Processing Subsystem

The Defendants propose that this phrase, found in claims 1 and 42 of the '137 patent and claim 1 of the '988 patent, means "the remote data access subsystem must be capable of encrypting the paper transaction data and the subsystem identification information and then transmitting the encrypted paper transaction data and the encrypted subsystem identification information to the central data processing subsystem." The Plaintiff argues that the phrase means "the data access subsystem provides for somewhere in the system encrypted subsystem identification information and encrypted paper transaction data to hide the substance as this data flows in the system."

The entire clause in which this disputed phrase appears is as follows:

> "at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access

> subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem"

The disputed phrase plainly requires that the encrypted subsystem identification information and encrypted paper transaction data is provided by the data access subsystem. The Plaintiff's definition would appear to allow for the encryption of the subsystem identification information and the paper transaction data to be performed somewhere in the system other than at the data access subsystem, in which case, the data access subsystem would not be providing the encrypted information and data. The Defendants' proposed construction requires that the remote data access subsystem "then transmit" the encrypted information to the central data processing subsystem. Within the context of the claim clause as a whole, the encrypted information and data is provided by the data access subsystem and transmitted to the data processing subsystem via the communication network.

The Court will construe this phrase to mean that the data access subsystem encrypts subsystem identification information and encrypts paper transaction data and provides the encrypted information and encrypted data for transmission to the data processing subsystem.

IT IS SO RECOMMENDED.

Within ten (10) days after receipt of the magistrate judge's report, any party may serve and file written objections to the findings and recommendations of the magistrate judge. 28 U.S.C.A. 636(b)(1)(C).

Failure to file written objections to the proposed findings and recommendations contained in this report within ten days after service shall bar an aggrieved party from *de novo* review by the district court of the proposed findings and recommendations and from appellate review of factual findings accepted or adopted by the district court except on grounds of plain error or manifest injustice. *Thomas v. Arn*, 474 U.S. 140, 148 (1985); *Rodriguez v. Bowen*, 857 F.2d 275, 276-77 (5th Cir. 1988).

SIGNED this 2nd day of November, 2004.

CAROLINE M. CRAVEN
UNITED STATES MAGISTRATE JUDGE